

REMARKS

Please reconsider this application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of the Claims

Claims 1-8 are pending in this application. Claims 1, 5, and 8 are independent. The remaining claims depend, directly or indirectly, from the independent claims.

Amendments to the Claims

Claims 1, 5, and 8 have been amended by way of this reply to clarify the claimed invention. No new matter has been added by these amendments. Support may be found, for example, in the original claims and paragraphs [0010], [0014], [0028], [0029], and [0035] of the published specification. The amendments are believed to require no further prior art search. At least, the amendments simplify issues for allowance or appeal, do not raise new issues, and do not constitute new matter. Accordingly, entry and favorable consideration is respectfully requested.

Rejection(s) under 35 U.S.C. § 112

Claims 1, 5, and 8 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. To the extent this rejection may still apply to the amended claims, this rejection is respectfully traversed.

In the present Office Action, the Examiner alleges that the present specification fails to "mention or teach that the key data can be modified by a key data writing equipment." See Office Action of May 28, 2008 at page 2. The Applicant respectfully disagrees. "Flash memory

16 is rewriteable in a prescribed unit, for example, a unit of 32 Kb. In a specific area 17 of 32 Kb, key data is stored in advance in a unit of byte for decryption or the like.” See paragraph [0028] of the published specification. “Writing of key data 23 and 24 is performed by program-controlled key data writing equipment such as personal computer 30 in FIG. 4.” See paragraph [0030] of the published specification.

As such, the specification explicitly recites that key data 23 and 24 is written to flash memory 16 by key data writing equipment. One of ordinary skill in the art will recognize how to write data to flash memory. Therefore, the present specification provides sufficient written description to enable one of ordinary skill in the art to practice the present invention without undue experimentation. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C. § 103

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,481,610 (“Doiron”) in view of U.S. Patent Application Publication No. 2003/0182565 (“Nakano”). To the extent this rejection may still apply to the amended claims, this rejection is respectfully traversed.

The present invention relates to “equipment for DVD capable of protecting prescribed information such as a password or key data for encryption or decryption recorded in a memory, and a method and an apparatus for recording the prescribed information.” See paragraph [0002] of the published specification. “An object of the present invention is to provide equipment for DVD capable of protecting prescribed information such as key data stored in a memory against copy or peeping.” See paragraph [0008] of the published specification. As such, “the present

invention includes a memory in which key data associated with information on a DVD is recorded in advance, and a processing portion processing information on the DVD using the key data from the memory. In the memory, random data is written around the key data." See paragraph [0009] of the published specification.

The key data may serve as an encryption key for equipment that encrypts and records information on a DVD. See paragraph [0011] of the published specification. The key data may also serve as a decryption key for equipment that decrypts information read from a DVD. See paragraph [0012] of the published specification. In addition, "the key data is recorded buried in the random data in the memory, a third party cannot identify and read the key data from the memory. Therefore, the key data stored in the memory can be protected against copy or peeping." See paragraph [0010] of the published specification. Moreover, the key data can be modified by a key data writing equipment.

Thus, the claimed invention writes the prescribed information (the key data) to a prescribed area of the flash memory and writes random data in the entire unused area of the flash memory around the prescribed information in the prescribed area. The prescribed information is embedded in the random data in the flash memory and the boundary between the prescribed information and the random data cannot be easily discerned. Thus, it is difficult to extract the prescribed information from the random data and to decrypt the prescribed information. See paragraphs [0010] and [0014] of the published specification. Additionally, in order to read the prescribed information from the flash memory, it is necessary to designate the specific area in the flash memory as well as to designate the prescribed address. Therefore, a third party who attempts

to make an unauthorized access is required to obtain two types of information. In addition, the specific area in which the prescribed information and random data are written is an area having a prescribed size comparable to one access unit of the flash memory. Thus, the prescribed information and the random data can be written through a single access to the flash memory.

Accordingly, claim 1, as amended, recites, in part, “a flash memory in which key data” “is recorded in advance in a prescribed address in an unused specific area” “accessing the information on said digital video disc” “using said key data read from said prescribed address in said flash memory” “wherein random data is written in entire unused area around an area where said key data is recorded in said specific area of said flash memory,” and that “the key data can be modified by a key data writing equipment.” Claims 5 and 8, as amended, recite, in part, substantially similar limitations to that of claim 1 noted above.

Doiron relates to “radio frequency (RF) communications systems, and more particularly to digital radios having a “secure” mode that encrypts and decrypts messages. Still more particularly, the present invention relates to techniques for securely loading and storing cryptographic key information within a mobile or portable radio transceiver.” See column 1, lines 6-12 of Doiron. In the present Office Action, the Examiner alleges that Doiron discloses “a memory in which key data associated with information on a digital video disc is recorded in advance,” “random data is written around said key in said memory,” and “means for processing the information on said digital video disc using said key from said memory.” See Office Action of May 28, 2008 at page. The Examiner admits that Doiron fails to show or suggest “the

information on a digital video disk” or that “key data can be modified by key data writing equipment.” The Examiner alleges that Nakano provides that which Doiron lacks.

In contrast, amended claims 1, 5, and 8 relate to a flash memory in which key data is written at a prescribed address in an unused area of the flash memory. The key data is used to access information on a digital video disc. The key data is protected from third parties because the prescribed address is unknown and random data is written in the unused portions of the flash memory where the key data is recorded. The key data can be modified by key data writing equipment. Doiron fails to show or suggest, at least, the above referenced limitations of the claimed invention. Furthermore, Nakano fails to show or suggest that which Doiron lacks.

In view of the above, independent claims 1, 5, and 8 are patentable over Doiron and Nakano, whether considered separately or in combination for at least the reasons set forth above. Dependent claims 2, 3, 4, 6, and 7 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 04536/034001).

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Respectfully submitted,

By 

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